

Like variety *adenocaulon*, but with the seeds destitute of coma. PROVINCE OF QUEBEC: shaly beach of the River St. Lawrence, Berthier, Montmagny Co., July 14, 1922, *Fernald & Pease*, no. 25196; rocky tidal shore of the St. Lawrence, St. Vallier, Aug. 9, 1923, *Svenson & Fassett*, no. 874 (TYPE in Gray Herb.).

GRADUATE SCHOOL OF ARTS AND SCIENCES, HARVARD UNIVERSITY.

ANOTHER DAVENPORT FERN HERBARIUM.

C. A. WEATHERBY.

PROBABLY most fern students in America know that the Davenport Fern Herbarium is the property of the Massachusetts Horticultural Society and is kept in their building in Boston. It consists of specimens of the ferns known, at the time when it was formed, to occur in North America north of Mexico, carefully selected, where selection was possible, to show the characteristics and range of variation of each species, with a few extra-limital specimens for comparison. Its extent is still indicated with a fair degree of accuracy by the Catalogue of 1879 and the supplement thereto of 1883, though after the latter date Davenport added occasional sheets of newly discovered species or of old ones whose representation he thought inadequate. It contains the types of the following species and varieties:—*Aspidium simulatum*, *Cheilanthes fibrillosa*, *C. Parishii*, *C. Pringlei*, *C. villosa*, *C. viscida*, *Cystopteris fragilis*, var. *laciniata*, *Notholaena Grayi*, *N. Schaffneri*, var. *mexicana*, and *Pellaea Wrightiana*, var. *compacta*. Critical notes by Davenport himself and letters from Asa Gray, J. G. Baker, and D. C. Eaton are now and then pasted into the folders which contain the specimens. Altogether, the collection is of more than ordinary interest.

But Davenport's herbarium-making was not confined within the limits set for this collection. Almost up to the time of his death in 1907, he continued to acquire specimens from many parts of the world. The resultant collection remained in the possession of his family until December, 1922, when it was given to the Gray Herbarium by his daughter, Miss Mary Elizabeth Davenport. As there received, it numbered about 4500 sheets, of which perhaps 150 were flowering plants, mosses, and algae, the remainder ferns. Nearly all of them were unmounted, and they had apparently never been fully organized.

Any collection of such size, belonging to a botanist of Davenport's reputation, will contain some rejicienda in the form, for example, of scraps sent in for identification by thoughtless correspondents. And any unmounted collection, no matter if, as in this case, it is preserved with pious care, is liable to mishaps such as the loss of labels. Davenport's has not escaped; there are in it a considerable number of specimens totally without data. But, after all deductions from such causes have been made, there remains a mass of material of very real value and sometimes of unexpected interest—as when there turned up a frond from one of the isotypes of *Aspidium mohrioides* Bory, described from the Falkland Islands in 1828, or when there were found some half dozen ample collections of European *Botrychium matricariaefolium*, previously represented at Cambridge by two meager specimens. This residue—and it is large—forms a very welcome addition to the Gray Herbarium; some further account of what it contains may be of interest.

First and foremost come the types of all the species and varieties described by Davenport except those listed above as at the Horticultural Society. Of all these latter there are isotypes, if some fragments of *Cheilanthes fibrillosa*¹ and a single pinna of *C. Parishii* may be so regarded. In several cases, the types are accompanied by larger or smaller amounts of duplicate material. It may be doubted if there is anywhere else so large and fine a set of *Asplenium Pringlei* as Davenport possessed.

Davenport did not collect extensively himself. His own specimens are mostly of ferns from localities readily accessible from his home in Medford, or taken from his garden. They are commonly chosen to illustrate variation, or they form large duplicate series of species or forms in which he was especially interested—the Botrychia, *Thelypteris cristata* \times *marginalis*, *T. simulata*, and crested forms of the marsh fern and the pasture fern. With these, and with sets received from Pringle and Mrs. E. H. Terry in Vermont, William Stout in

¹ In view of the fact that this species is still known only from the scanty type collection, it may be of interest to record that there is another isotype in the herbarium of Brown University. *C. fibrillosa* was detected by Davenport (according to a letter of his to D. C. Eaton, Feb. 4, 1885) among a set of specimens of *Cheilanthes* collected by Parish for William Stout. They arrived after Stout's death and were sent by his sister, Miss Anna E. Stout, to Davenport for examination. He kept a comparatively small portion of the material of *C. fibrillosa* for himself, returning the rest to Miss Stout. Later she gave her brother's herbarium to Brown. The specimen of *C. fibrillosa* there is probably the best in existence.

New York and other correspondents, the ferns of the northeastern United States are adequately, but, except in the special cases mentioned, by no means copiously, represented.

As to other regions, the scope of the herbarium may be indicated by the following list of the larger and better known collections from which it has material.

NEWFOUNDLAND: Robinson & Schrenk.

EASTERN CANADA: Fernald & Collins, Gaspé.

SOUTHEASTERN UNITED STATES: Donnell Smith, various states; A. H. Curtiss and Mary C. Reynolds, Florida; W. C. Dukes, Alabama—an interesting series of the ternate *Botrychia* of that region.

TEXAS: E. Palmer; Reverchon.

SOUTHWESTERN UNITED STATES: Pringle, Lemmon, E. Palmer, and numerous correspondents in California—so many that the species of that region are often better represented than those of the Northeast.

NORTHWESTERN AMERICA: Suksdorf's earlier collections; Howell, Oregon and Alaska; L. M. Turner, Alaska.

MEXICO: An apparently almost complete set of the ferns of Pringle's earlier collections (sent in for naming), including several numbers not before represented at the Gray Herbarium; sets of E. Palmer, Conzatti & González, C. L. Smith and Millspaugh (Yucatan); a few specimens each from Rovirosa and Fink.

WEST INDIES: Full sets of the ferns of Millspaugh's *Plantae Utowanae* and *Plantae Antillanae*; J. R. Churchill, Jamaica; Hahn, Martinique, some of whose specimens are from localities on the slopes of Mont Pelée doubtless blown into dust or buried under lava in the great eruption.

SOUTH AMERICA: Fendler, Venezuela—a good set; Leprieur, French Guiana.

EUROPE: R. A. Ware; H. Christ—a set containing series of named varieties and forms of various species.

REGION OF THE PACIFIC: Vieillard, different islands; William Wendte, Hawaiian Islands; Ferrie, Loo Choo (a few only); Verreaux, Australia; Eric Craig, New Zealand.¹

Interest of another sort is added to the collection by Davenport's habit of keeping with his specimens letters relating more or less to them. There are perhaps a hundred of these letters from persons of all degrees of obscurity and prominence. Among them are—to mention a few—J. G. Baker, H. Christ, Raynal Dodge, A. A. and D. C. Eaton, Engelmann, Thomas Howell, Leggett, Pringle, Redfield, and John Robinson. A large proportion of the letters are of interest chiefly as autographs; some, however, cast side-lights on the biography, the character, or the opinions of their writers, or record incidents not unworthy of note.

¹ Craig used to prepare dried bouquets of ferns and mosses which he sold to those who fancied such things and, so far as he is known to botanists, may be infamous accordingly. But he also issued sets of real botanical specimens, for the most part accurately named, some of which came into the hands of American amateurs but seem only now to be making their way into public herbaria. Their defect is lack of detailed data; "New Zealand" is the only information vouchsafed.

Pringle writes from Vermont, Dec. 15, 1901: "The thought of going out alone again was appalling at first; but I am making up my mind to face the dreariness and peril. Pity my lonely life." It is good to learn that, the plunge once made, things were not always so bad. "I trust," he writes from Monterey in 1906, "that you can be grateful, as I am, for every remaining day of life in this beautiful world . . . I have waited . . . sixteen years . . . to return to this Monterey region; and now I am rewarded by finding here the most magnificent flora I ever met with. Never a garden so gay with flowers, no field with so multitudinous species." It appears, if any evidence were needed, that botanists of a generation ago sometimes took nomenclatorial argument very seriously; and that they did not always admire one another. "————— seems determined to keep his *stupidity* before the scientific world . . . I have advised the editor of his incapacity and conceit." It appears, too, that they had their foibles. One collector, sending in two insignificant fragments, one sterile, for determination, wrote:—"I alone am entitled to whatever credit there may be in getting these ferns . . . If we discover a new *Notholaena*, I hope you will associate my name with it." Davenport submitted this letter and the specimens to John Robinson, and that downright gentleman replied, in phrases which seem the more emphatic in his bold handwriting:—"The man who sent these specimens to have named would send a finger nail to an anatomist to get the name of the man or woman who pared it off. The man who would send such immature and fragmentary specimens to have new names has impudence worthy of the man who, having had a pair of boots given to him, asked the donor to black them for him. Give him fits!"

As to incident, here is a pleasantly characteristic letter from D. C. Eaton, accompanying a specimen of *Cheilanthes lanosa* from New Haven.

Dec. 17, 1892

My dear Mr. Davenport:—

Have a fern new to New England! and gathered within three miles of my house. Mr. Van Ingen climbed a trap rock cliff till he could get neither up nor down, found this fern, and waited till men let down a rope from the top and hauled him up. I do not think I shall try it—though I did climb clear to the top 42 years ago.

Yours very truly,
Daniel C. Eaton.

Perhaps the most interesting of all, as they certainly are the most surprising, are a series of letters from William Stout. Stout was an

amateur of New York who gathered a considerable herbarium of ferns and evidently came to know them well and to take a highly intelligent interest in the problems of their classification. In particular he was attracted to the group of scaly *Cheilanthes* of the southwestern United States, the taxonomic difficulties of which have recently been so happily cleared up by Dr. Maxon.¹ In the fall of 1879 he visited New Haven where he spent several days in examining Eaton's material² and devised a scheme of classification which, as the admirably clear statements in his letters show, agreed not only essentially, but in many details, with that worked out long afterward and quite independently by Maxon. He separated the same species (except *C. villosa* which he evidently had not seen) and by the same characters of rootstock and scales.

Stout submitted his conclusions to Eaton, apparently with permission to use them as he liked in the "Ferns of North America," then still in process of publication, and to Davenport. Eaton, as one of his letters shows, was at first sufficiently impressed not only to give a manuscript name to one of Stout's species,³ the Californian plant now to be known as *C. Covillei* Maxon, but actually to send a description of it to the Torrey Bulletin for publication. Before it could be printed, however, he changed his mind and withdrew it, remarking to Davenport, "Mr. Stout may publish the species, *which is really his own*, if he wishes." Davenport, after some vacillation, proved rather more receptive. In Feb., 1880, he even wrote a long letter to Eaton urging the recognition of the Californian plant as a species. But before this letter was copied, the receipt of new specimens which broke down a character he thought he had discovered caused him also to change his mind, and the letter was never sent. He was still disposed to recognize Stout's segregates as varieties of *C. Fendleri*, a disposition of them which by no means satisfied Stout. Finally the matter was referred to J. G. Baker at Kew; he replied that all

¹ Proc. Biol. Soc. Washington xxxi. 139-152 (Nov. 29, 1918).

² "Professor Eaton," he writes to Davenport, "received me with the utmost kindness and courtesy, much better than I knew how to treat him, and I could not help feeling myself at a disadvantage in that regard. I feel very uncomfortable in being so much in the attitude of questioning his judgment and can but deprecate my too direct manner of expressing my opinion when my mind is clear. My comfort is that the facts have seemed to support me." The passage speaks clearly of the quality of both men.

³ See Maxon, op. cit. 148.

the plants concerned were only forms of a single species, *C. myriophylla*. Eaton ultimately adopted the same view.

But Stout proved worthy of his name. Having convinced himself that he was right, he refused to yield to any array of authority, however distinguished. "I am a very wicked man" he wrote to Davenport, "and do not care a fig for labels when the plants confute them, even though they come from Kew. You must know that I recd a serious shock when I found there was no botanical Pope &, in consequence, have become a monstrous botanical skeptic . . . I think I am right in listening to the plants *first* & with confidence, to authorities next & always more or less doubtingly." He maintained his position vigorously through a long epistolary argument with Davenport, which he closed at last, in June, 1880, with a bit of half-serious extravagance and a wholly serious resolve. "Throwing our scaly *Cheilanthes* into *myriophylla* seems to me very like throwing scientific botany to the four winds. Apply a similar scale of reduction to the 3000 ferns and what would be left? A few groups, divisions and subdivisions of genera. Specific lines would be practically abandoned. What is the use, then, of vexing ourselves about nice points of specific distinction? Let us call all the plants *greens* & make a salad of them. 'Better is a dinner of herbs' than scientific botany gone daft . . . Still I am ready to study these *Cheilanthes* all over again when I can get sufficient fresh material . . . I cannot differ as I do from all authorities without being much concerned lest it is I who have gone daft."

Between June, 1880, and March, 1883, before this re-examination could be undertaken, Stout died. In the latter year Davenport began an article expounding his own views; the half-finished manuscript is among his papers. With it have lain, unknown to everyone, the letters of Stout which set forth his treatment. That it was not he who was "daft" has remained for Dr. Mason to prove.

There is nothing to indicate that Stout had had previous experience in taxonomic work. He saw only scanty material—two sheets of *Cheilanthes Wootoni* and so little of *C. intertexta* that he was not sure of its status, though he thought it distinct. It is extraordinary that under such circumstances he should have struck out on a line of his own, at variance with the prevailing taxonomic ideas of his day, and should have produced a revision of a difficult (though small) group so good that after forty years and the accumulation of much

more material, an expert specialist in ferns could do no better. An excellent pteridologist was wasted in William Stout.¹

GRAY HERBARIUM

REPORTS ON THE FLORA OF THE BOSTON
DISTRICT,—XLIV.

COMPOSITAE.

ASTER.

A. acuminatus Michx. Low woods; frequent, but no reports south of Norwell, Rockland and Norwood.

A. amethystinus Nutt. Moist ground, rare; Beverly, Cambridge, Arlington, Belmont, Brighton; Westford, according to Dame & Collins, Fl. Middlesex Co. 48, 1888.

A. COMMUTATUS (T. & G.) Gray. Railway, Lowell Junction [Wilmington] (*J. R. Churchill*, Sept. 27, 1884). Specimen in herb. J. R. Churchill. A western waif.

A. cordifolius L. Low ground, common throughout.

A. cordifolius L., var. **polycephalus** Porter. Open woods, common, Danvers (*J. H. Sears*, Sept. 20, 1884); Medford (*Mrs. P. D. Richards*, no date); Winchester (*F. W. Grigg*, Sept. 23, 1911); Cambridge (*F. W. Grigg*, Sept. 28, 1921).

A. divaricatus L. Dry woods, very common throughout.

A. dumosus L. Dry fields and pastures, very common throughout.

A. dumosus L., var. **coridifolius** (Michx.) T. & G. Dry pasture, Hingham (*C. H. Knowlton*, Sept. 9, 1916); Dover (*F. W. Hunnewell*, Sept. 18, 1915); Ipswich (*Wm. Oakes*, no date); Tewksbury (no date).

A. dumosus L., var. **strictior** T. & G. Damp border of South Reservoir, Medford (*W. P. Rich*, July 23, 1894); dry field, Chelmsford (*C. H. Knowlton*, Sept. 7, 1914); Stony Brook Reservation (*N. T. Kidder*, Aug. 16, 1919); dry pasture, Hingham (*C. H. Knowlton*, Sept. 9, 1916); dry fields, Sharon (*J. A. Cushman*, Aug. 23, 1909).

¹ The few facts here given are all that I have been able to find out about Mr. Stout. If any reader chances to possess further information it will be welcomed by me.

I am indebted to Dr. George F. Eaton and to Prof. J. F. Collins for the loan of letters and other assistance in collecting information on some of the matters here touched upon.